

ON THE BOXICITY AND

with the $N(x)$ also be motivated

These two r
of a graph, the
sharp upper bo
of points. We st

ON THE BOXICITY AND

is embeddable into n -graphs. For, each coeasily that if $G = H$

Following [4], it the points of the gra Note that since our g two points are equiv

PROOF: Suppose

If $k > 0$, embed
 $\langle 0, 0, \dots, 0 \rangle$ and

Next, suppose
 embedded into k -
 and so not embed

ON THE BOXICITY AND CU

the case $n = 0$. Next, sup
 where each $G_i = (A, I_i)$ i
 lection of all I_i so that I_i i
 a graph $K_j = \bigcap \{G_i : I_i$
 graph H_j described above
 I_i is in one and only on
 each i $I_i \supseteq I$ Thus, if

To close this chapter on bipartite graphs, it is left to the reader to prove the following

LEMMA 1. *A subgraph of the*

ON THE BOXICITY AND

LEMMA 3. *If $n \neq 3$,*

PROOF: The major
inequality:

$$e(n) :$$

T (C)

We are now
 $n \neq 3, 6$, and so
 prove $\text{cub } G \leq$
 subgraph of the
 Clearly $n \geq 4$,
 $\text{cub}(G - \{a, b,$
 by Lemma 3.2

ON THE BOXICITY AND

PROOF: If $p > 1$, t
wise, the result is triv

Note that if all n_j
in Theorem 7 also c
dimensional hyperpla
optimal. Suppose no
due to $c(n) = d(n)$

310

$E(n - 2) + 1$, w
and Corollary 7